

Access Free Heriot Watt Reservoir Engineering Free Download Pdf

Hydrocarbon Exploration and Production *Sexual Attraction Proceedings of the International Field Exploration and Development Conference 2021* *Intelligent Digital Oil and Gas Fields* Basic Applied Reservoir Simulation Petroleum Economics and Risk Analysis Petroleum Fluid Phase Behavior *Polymer-Improved Oil Recovery* Petroleum Reservoir Rock and Fluid Properties, Second Edition Equations of State and PVT Analysis SPE Reservoir Evaluation & Engineering Advanced Modelling with the MATLAB Reservoir Simulation Toolbox Proceedings of the International Field Exploration and Development Conference 2020 The Practice of Reservoir Engineering SPE Reservoir Engineering Carbonate Reservoir Heterogeneity Petroleum Reservoir Rock and Fluid Properties Proceedings of the International Field Exploration and Development Conference 2018 PVT and Phase Behaviour Of Petroleum Reservoir Fluids How to Store CO2 Underground: Insights from early-mover CCS Projects *Wireline Formation Testing & Well Deliverability* Proceedings of the International Petroleum and Petrochemical Technology Conference 2020 Proceedings of the 2021 International Petroleum and Petrochemical Technology Conference The Practice of Reservoir Engineering (Revised Edition) Enhanced Oil Recovery Energy information data base Core Analysis Hydrocarbon Exploration and Production *Fundamentals of Reservoir Engineering* Practical Aspects of Flow Assurance in the Petroleum Industry Intelligent Computational Optimization in Engineering *Statistics for Petroleum Engineers and Geoscientists* New Scientist Reservoir Model Design Fundamentals of Reservoir Rock Properties Reservoir Quality of Clastic and Carbonate Rocks Fundamental Controls on Fluid Flow in Carbonates *Well Completion Design* *Review of Hydraulic Fracturing Technology and Practices* Integrated Sand Management for Effective Hydrocarbon Flow Assurance

Fundamental Controls on Fluid Flow in Carbonates Sep 30 2019 This volume highlights key challenges for fluid-flow prediction in carbonate reservoirs, the approaches currently employed to address these challenges and developments in fundamental science and technology. The papers span methods and case studies that highlight workflows and emerging technologies in the fields of geology, geophysics, petrophysics, reservoir modelling and computer science. Topics include: detailed pore-scale studies that explore fundamental processes and applications of imaging and flow modelling at the pore scale; case studies of diagenetic processes with complementary perspectives from reactive transport modelling; novel methods for rock typing; petrophysical studies that investigate the impact of diagenesis and fault-rock properties on acoustic signatures; mechanical modelling and seismic imaging of faults in carbonate rocks; modelling geological influences on seismic anisotropy; novel approaches to geological modelling; methods to represent key geological details in reservoir simulations and advances in computer visualization, analytics and interactions for geoscience and engineering.

Energy information data base Sep 10 2020

SPE Reservoir Evaluation & Engineering Dec 26 2021

PVT and Phase Behaviour Of Petroleum Reservoir Fluids Apr 17 2021 This book on PVT and Phase Behaviour Of Petroleum Reservoir Fluids is volume 47 in the Developments in Petroleum Science series. The chapters in the book are: Phase Behaviour Fundamentals, PVT Tests and Correlations, Phase Equilibria, Equations of State, Phase Behaviour Calculations, Fluid Characterisation, Gas Injection, Interfacial Tension, and Application in Reservoir Simulation.

How to Store CO2 Underground: Insights from early-mover CCS Projects Mar 17 2021

This book introduces the scientific basis and engineering practice for CO2 storage, covering topics such as storage capacity, trapping mechanisms, CO2 phase behaviour and flow dynamics, engineering and geomechanics of geological storage, injection well design, and geophysical and geochemical monitoring. It also provides numerous examples from the early mover CCS projects, notably Sleipner and Snøhvit offshore Norway, as well as other pioneering CO2 storage projects.

Proceedings of the International Field Exploration and Development Conference 2021 Sep 03 2022

This book focuses on reservoir surveillance and management, reservoir evaluation and dynamic description, reservoir production stimulation and EOR, ultra-tight reservoir, unconventional oil and gas resources technology, oil and gas well production testing, and geomechanics. This book is a compilation of selected papers from the 11th International Field Exploration and Development Conference (IFEDC 2021). The conference not only provides a platform to exchange experience, but also promotes the development of scientific research in oil & gas exploration and production. The main audience for the work includes reservoir engineer, geological engineer, enterprise managers, senior engineers as well as professional students.

SPE Reservoir Engineering Aug 22 2021

Fundamentals of Reservoir Rock Properties Dec 02 2019 This book explains the basic technologies, concepts, approaches, and terms used in relation to reservoir rocks. Accessible to engineers in varying roles, it provides the tools necessary for building reservoir characterization and simulation models that improve resource definition and recovery, even in complex depositional environments. The book is enriched with numerous examples from a wide variety of applications, to help readers understand the topics. It also describes in detail the key relationships between the different rock properties and their variables. As such, it is of interest to researchers, engineers, lab technicians, and postgraduate students in the field of petroleum engineering.

Core Analysis Aug 10 2020

Core Analysis: A Best Practice Guide is a practical guide to the design of core analysis programs. Written to address the need for an updated set of recommended practices covering special core analysis and geomechanics tests, the book also provides unique insights into data quality control diagnosis and data utilization in reservoir models. The book's best practices and procedures benefit petrophysicists, geoscientists, reservoir engineers, and production engineers, who will find useful information on core data in reservoir static and dynamic models. It provides a solid understanding of the core analysis procedures and methods used by commercial laboratories, the details of lab data reporting required to create quality control tests, and the diagnostic plots and protocols that can be used to identify suspect or erroneous data. Provides a practical overview of core analysis, from coring at the well site to laboratory data acquisition and interpretation Defines current best practice in core analysis preparation and test procedures, and the diagnostic tools used to quality control core data Provides essential information on design of core analysis programs and to judge the quality and reliability of core analysis data ultimately used in reservoir evaluation Of specific interest to those working in core analysis, porosity, relative permeability, and geomechanics

Integrated Sand Management for Effective Hydrocarbon Flow Assurance Jun 27 2019

This Handbook provides solutions to the fundamental issues associated with wells and reservoirs experiencing sanding problems, especially in deepwater environments. Sand Management is a massive challenge for the petroleum industry as it extends its exploration activities to new frontiers. Challenging ultra deepwater, High Pressure-High Temperature (HP-HT) and Arctic environments require engineers to drill more complex wells and manage more complex reservoirs, the majority of which are prone to massive sand production. Covering such fundamentals as how to maximize individual wells and field development performance, as well as how to minimize operational

cost, non-productive time and guarantee flow assurance across the entire composite production system from reservoirs through the wellbore to the topside and flow lines, this handbook explains that the biggest challenge facing operators is the shortage of sand management personnel and helps companies realize the value of their assets. Reference for knowledge transfer and skills development in sand management for effective flow assurance Emphasis on HP-HT and deepwater environments Meets the needs of new and practising engineers alike as well as non-technical personnel supporting the offshore industry

Proceedings of the International Field Exploration and Development Conference 2020

Oct 24 2021 This book is a compilation of selected papers from the 10th International Field Exploration and Development Conference (IFEDC 2020). The proceedings focuses on Reservoir Surveillance and Management, Reservoir Evaluation and Dynamic Description, Reservoir Production Stimulation and EOR, Ultra-Tight Reservoir, Unconventional Oil and Gas Resources Technology, Oil and Gas Well Production Testing, Geomechanics. The conference not only provides a platform to exchanges experience, but also promotes the development of scientific research in oil & gas exploration and production. The main audience for the work includes reservoir engineer, geological engineer, enterprise managers senior engineers as well as professional students.

Intelligent Computational Optimization in Engineering Apr 05 2020 We often come across computational optimization virtually in all branches of engineering and industry. Many engineering problems involve heuristic search and optimization, and, once discretized, may become combinatorial in nature, which gives rise to certain difficulties in terms of solution procedure. Some of these problems have enormous search spaces, are NP-hard and hence require heuristic solution techniques. Another difficulty is the lack of ability of classical solution techniques to determine appropriate optima of non-convex problems. Under these conditions, recent advances in computational optimization techniques have been shown to be advantageous and successful compared to classical approaches. This Volume presents some of the latest developments with a focus on the design of algorithms for computational optimization and their applications in practice. Through the chapters of this book, researchers and practitioners share their experience and newest methodologies with regard to intelligent optimization and provide various case studies of the application of intelligent optimization techniques in real-world applications. This book can serve as an excellent reference for researchers and graduate students in computer science, various engineering disciplines and the industry.

The Practice of Reservoir Engineering Sep 22 2021 The Practice of Reservoir Engineering has been written for those in the oil industry requiring a working knowledge of how the complex subject of hydrocarbon reservoir engineering can be applied in the field in a practical manner. The book is a simple statement of how to do the job and is particularly suitable for reservoir/production engineers and is illustrated with 27 examples and exercises based mainly on actual field developments. It will also be useful for those associated with the subject of hydrocarbon recovery. Geoscientists, petrophysicists and those involved in the management of oil and gas fields will also find it particularly relevant. The new <http://www.elsevier.nl/locate/isbn/0444506705> Practice of Reservoir Engineering Revised Edition will be available soon.

Statistics for Petroleum Engineers and Geoscientists Mar 05 2020

Reservoir Quality of Clastic and Carbonate Rocks Oct 31 2019 Reservoir quality is studied using a wide range of similar techniques in both sandstones and carbonates. Sandstone and carbonate reservoir quality both benefit from the study of modern analogues and experiments, but modelling approaches are currently quite different for these two types of reservoirs. There are many common controls on sandstone and carbonate reservoir quality, but also distinct differences due primarily to mineralogy. Numerous controversies remain including the question of oil inhibition,

the key control on pressure solution and geochemical flux of material to or from reservoirs. This collection of papers contains case-study-based examples of sandstone and carbonate reservoir quality prediction as well as modern analogue, outcrop analogue, modelling and advanced analytical approaches.

Carbonate Reservoir Heterogeneity Jul 21 2021 This book provides a comprehensive overview of the parameters and factors that cause heterogeneity in carbonate reservoirs, and examines how they interact with one another. It explores the various scales of heterogeneity, how they are caused, and how they can be minimized, as well as how the scales affect each other, providing practical examples in each chapter. The book concludes by discussing the effect of heterogeneity on petrophysical evaluations. As reducing heterogeneity is the only way to obtain accurate carbonate reservoir characteristics at the regional scale, the book offers an important reference guide for all geologists, engineers, and modelers working with subsurface data.

Petroleum Economics and Risk Analysis May 31 2022 **Petroleum Economics and Risk Analysis: A Practical Guide to E&P Investment Decision-Making, Volume 69**, is a practical guide to the economic evaluation, risk evaluation and decision analysis of oil and gas projects through all stages of the asset lifecycle, from exploration to late life opportunities. This book will help readers understand and make decisions with regard to petroleum investment, portfolio analysis, discounting, profitability indicators, decision tree analysis, reserves accounting, exploration and production (E&P) project evaluation, and E&P asset evaluation. Includes case studies and full color illustrations for practical application Arranged to reflect lifecycle structure, from exploration through to decommissioning Demonstrates industry-standard decision-making techniques as applied to petroleum investments in the oil and gas industry

Proceedings of the 2021 International Petroleum and Petrochemical Technology Conference Dec 14 2020 This book is a compilation of selected papers from the 5th International Petroleum and Petrochemical Technology Conference (IPPTC 2021). The work focuses on petroleum & petrochemical technologies and practical challenges in the field. It creates a platform to bridge the knowledge gap between China and the world. The conference not only provides a platform to exchanges experience but also promotes the development of scientific research in petroleum & petrochemical technologies. The book will benefit a broad readership, including industry experts, researchers, educators, senior engineers and managers.

New Scientist Feb 02 2020 **New Scientist** magazine was launched in 1956 "for all those men and women who are interested in scientific discovery, and in its industrial, commercial and social consequences". The brand's mission is no different today - for its consumers, **New Scientist** reports, explores and interprets the results of human endeavour set in the context of society and culture.

Well Completion Design Aug 29 2019 Completions are the conduit between hydrocarbon reservoirs and surface facilities. They are a fundamental part of any hydrocarbon field development project. They have to be designed for safely maximising the hydrocarbon recovery from the well and may have to last for many years under ever changing conditions. Issues include: connection with the reservoir rock, avoiding sand production, selecting the correct interval, pumps and other forms of artificial lift, safety and integrity, equipment selection and installation and future well interventions. * Course book based on course well completion design by TRACS International * Unique in its field: Coverage of offshore, subsea, and landbased completions in all of the major hydrocarbon basins of the world. * Full colour

Petroleum Fluid Phase Behavior Apr 29 2022 This book deals with complex fluid characterization of oil and gas reservoirs, emphasizing the importance of PVT parameters for practical application in reservoir simulation and management. It covers modeling of PVT parameters, QA/QC of PVT data from lab studies, EOS modeling, PVT simulation and compositional grading and variation. It describes generation of

data for reservoir engineering calculations in view of limited and unreliable data and techniques like downhole fluid analysis and photophysics of reservoir fluids. It discusses behavior of unconventional reservoirs, particularly for difficult resources like shale gas, shale oil, coalbed methane, reservoirs, heavy and extra heavy oils.

Proceedings of the International Petroleum and Petrochemical Technology Conference 2020 Jan 15 2021 This book is a compilation of selected papers from the 4th International Petroleum and Petrochemical Technology Conference (IPPTC 2020). The proceedings focus on Static & Dynamic Reservoir Evaluation and Management; Drilling, Production and Oilfield Chemistry; Storage, Transportation and Flow Assurance; Refinery and Petrochemical Engineering; Machinery, Materials and Corrosion Protection. The conference not only provides a platform to exchanges experience, but also promotes the development of scientific research in oil & gas exploration and production. The main audience for the work includes industry experts, leading engineers, researchers and technical managers as well as university scholars.

Intelligent Digital Oil and Gas Fields Aug 02 2022 *Intelligent Digital Oil and Gas Fields: Engineering Concepts, Models, and Implementation* focuses on technical equipment and workflows to introduce the concepts of computer analytics, collaboration and change management—all important aspects of the digital oilfield. The book is packed with multiple examples and lessons learned from various budgets, conditions and case studies, creating a reference that can help managers, engineers and key IT experts understand specifics on how to filter data, address analytics, and link workflow across PPT (People Process and Technology), enabling the team to make better informed decisions with a higher degree of certainty and reduced risk. Digital oil fields started as a small and expensive investment but gained popularity quickly to help increase productivity of reservoirs. Today oil and gas companies, both big and small, can utilize this fast-paced technology; however, with data increasing and operating environments and budgets becoming more challenging, petroleum engineers and managers are always pressed to keep up with more complex infrastructures and turn big data into profitable decisions. The book features a list of references for further reading and a look-ahead chapter on the next generation digital oil field, e.g., cloud computing, big data analytics and advances in nanotechnology. The book helps transform engineering workflows and data analytics into successfully delivered oil and gas projects. Covers multiple examples and lessons learned from a variety of reservoir and production budgets, conditions and case studies Includes techniques and training on change management and collaboration including how to plan and present to management on project value Delivers real and readily applicable knowledge on technical equipment, workflows and data challenges such as acquisition and quality control that make up the digital oil field solutions of today

Hydrocarbon Exploration and Production Nov 05 2022 *Hydrocarbon Exploration and Production, Second Edition* is a comprehensive and current introduction to the upstream industry, drawing together the many inter-disciplinary links within the industry. It presents all the major stages in the life of an oil or gas field, from gaining access to opportunity, through exploration, appraisal, development planning, production, and finally to decommissioning. It also explains the fiscal and commercial environment in which oil and gas field development takes place. The book is written for industry professionals who wish to be better informed about the basic technical and commercial methods, concepts and techniques used in the upstream oil and gas business. The authors are the founders of TRACS International, a company which has provided training and consultancy in Exploration and Production related issues for many clients world-wide since 1992. * Clearly written in a concise and straightforward manner * Features detailed technical illustrations to maximize learning * Presents major advances in the industry, including technical methods for field evaluation and development and techniques used for managing risk within the

business * Developed from TRACS International course materials, discussions with clients, and material available in the public domain

Advanced Modelling with the MATLAB Reservoir Simulation Toolbox Nov 24 2021

Presents advanced reservoir simulation methods used in the widely-used MRST open-source software for researchers, professionals, students.

Review of Hydraulic Fracturing Technology and Practices Jul 29 2019

Equations of State and PVT Analysis Jan 27 2022 Understanding the properties of a reservoir's fluids and creating a successful model based on lab data and calculation are required for every reservoir engineer in oil and gas today, and with reservoirs becoming more complex, engineers and managers are back to reinforcing the fundamentals. PVT (pressure-volume-temperature) reports are one way to achieve better parameters, and *Equations of State and PVT Analysis, 2nd Edition*, helps engineers to fine tune their reservoir problem-solving skills and achieve better modeling and maximum asset development. Designed for training sessions for new and existing engineers, *Equations of State and PVT Analysis, 2nd Edition*, will prepare reservoir engineers for complex hydrocarbon and natural gas systems with more sophisticated EOS models, correlations and examples from the hottest locations around the world such as the Gulf of Mexico, North Sea and China, and Q&A at the end of each chapter. Resources are maximized with this must-have reference. Improve with new material on practical applications, lab analysis, and real-world sampling from wells to gain better understanding of PVT properties for crude and natural gas Sharpen your reservoir models with added content on how to tune EOS parameters accurately Solve more unconventional problems with field examples on phase behavior characteristics of shale and heavy oil

Practical Aspects of Flow Assurance in the Petroleum Industry May 07 2020 With easily accessible oil reserves dwindling, petroleum engineers must have a sound understanding of how to access technically challenging resources, especially in the deepwater environment. These technically challenging resources bring with them complexities around fluid flow not normally associated with conventional production systems, and engineers must be knowledgeable about navigating these complexities. *Practical Aspects of Flow Assurance in the Petroleum Industry* aims to provide practical guidance on all aspects of flow assurance to offer readers a ready reference on how to ensure uninterrupted transport of processed fluids throughout the flow infrastructure by covering all practical aspects of flow assurance, being written in such a way that any engineer dealing with the oil and gas industry will be able to understand the material, containing solved examples on most topics, placing equal emphasis on experimental techniques and modeling methods, and devoting an entire chapter to the analysis and interpretation of published case studies. With its balance of theory and practical applications, this work provides petroleum engineers from a variety of backgrounds with the information needed to maintain and enhance productivity.

Basic Applied Reservoir Simulation Jul 01 2022

Wireline Formation Testing & Well Deliverability Feb 13 2021 Modern reservoir engineering must accommodate for a complex set of heterogeneous phases contained in the well and petroleum reservoir. Achieving the optimal solution to reservoir problems involves employing sophisticated simulation techniques, executing complex well-completion actions and following up with constant attention to the changes within a reservoir. Renowned petroleum engineer George Stewart offers in-depth information in his latest book, *Wireline Formation Testing and Well Deliverability*. A companion to his recent book, *Well Test Design & Analysis*, this newest technical volume covers the widest range of possible issues for reservoir engineering. Stewart's exhaustive explanations include the nuances of radial flow theory, examples of when to run production logs, and to well testing for drawdown in a commingled reservoir. The volume includes a CD containing chapters 13-17.

Enhanced Oil Recovery Oct 12 2020 Enhanced Oil Recovery

The Practice of Reservoir Engineering (Revised Edition) Nov 12 2020 This revised edition of the bestselling Practice of Reservoir Engineering has been written for those in the oil industry requiring a working knowledge of how the complex subject of hydrocarbon reservoir engineering can be applied in the field in a practical manner. Containing additions and corrections to the first edition, the book is a simple statement of how to do the job and is particularly suitable for reservoir/production engineers as well as those associated with hydrocarbon recovery. This practical book approaches the basic limitations of reservoir engineering with the basic tenet of science: Occam's Razor, which applies to reservoir engineering to a greater extent than for most physical sciences - if there are two ways to account for a physical phenomenon, it is the simpler that is the more useful. Therefore, simplicity is the theme of this volume. Reservoir and production engineers, geoscientists, petrophysicists, and those involved in the management of oil and gas fields will want this edition.

Sexual Attraction Oct 04 2022 Sexual Attraction explores different sides of mutual attraction between the sexes, especially why individuals are attracted to some people and not others who may themselves be generally well liked. This book also considers how sexual attraction is communicated to both people in a social encounter and argues that there is a strong but often disregarded prejudice against those who are physically unattractive. This monograph is comprised of eight chapters and opens with a discussion on sexual arousal in humans and its parallels with animal (particularly primate) behavior. The next chapter examines the process whereby we come to see others as beautiful and (sometimes) sexually desirable and how even very young children come to value looks. Examples of the privileges that the physically attractive are likely to enjoy in the classroom and the courtroom are given. The following chapters analyze the idea that we may not always make very accurate judgments about each other in relation to sexual behavior; popular misconceptions about personality and sexual behavior; how people behave towards each other during longer interaction sequences such as courtship and seduction; and the role of personality and behavior in attraction. The final chapter considers how physical attractiveness might be separated in people's minds from sexual attractiveness and social success. This text will be of interest to sociologists and psychologists.

Hydrocarbon Exploration and Production Jul 09 2020 This book on hydrocarbon exploration and production is the first volume in the series Developments in Petroleum Science. The chapters are: The Field Life Cycle, Exploration, Drilling Engineering, Safety and The Environment, Reservoir Description, Volumetric Estimation, Field Appraisal, Reservoir Dynamic Behaviour, Well Dynamic Behaviour, Surface Facilities, Production Operations and Maintenance, Project and Contract Management, Petroleum Economics, Managing the Producing Field, and Decommissioning.

Petroleum Reservoir Rock and Fluid Properties, Second Edition Feb 25 2022 A strong foundation in reservoir rock and fluid properties is the backbone of almost all the activities in the petroleum industry. Suitable for undergraduate students in petroleum engineering, Petroleum Reservoir Rock and Fluid Properties, Second Edition offers a well-balanced, in-depth treatment of the fundamental concepts and practical aspects that encompass this vast discipline. New to the Second Edition Introductions to Stone II three-phase relative permeability model and unconventional oil and gas resources Discussions on low salinity water injection, saturated reservoirs and production trends of five reservoir fluids, impact of mud filtrate invasion and heavy organics on samples, and flow assurance problems due to solid components of petroleum Better plots for determining oil and water Corey exponents from relative permeability data Inclusion of Rachford-Rice flash function, Plateau equation, and skin effect Improved introduction to reservoir rock and fluid properties Practice problems covering porosity, combined matrix-channel and matrix-fracture permeability, radial flow equations, drilling muds on fluid saturation, wettability concepts, three-phase oil relative permeability, petroleum reservoir fluids, various

phase behavior concepts, phase behavior of five reservoir fluids, and recombined fluid composition Detailed solved examples on absolute permeability, live reservoir fluid composition, true boiling point extended plus fractions properties, viscosity based on compositional data, and gas-liquid surface tension Accessible to anyone with an engineering background, the text reveals the importance of understanding rock and fluid properties in petroleum engineering. Key literature references, mathematical expressions, and laboratory measurement techniques illustrate the correlations and influence between the various properties. Explaining how to acquire accurate and reliable data, the author describes coring and fluid sampling methods, issues related to handling samples for core analyses, and PVT studies. He also highlights core and phase behavior analysis using laboratory tests and calculations to elucidate a wide range of properties.

Reservoir Model Design Jan 03 2020 This book gives practical advice and ready to use tips on the design and construction of subsurface reservoir models. The design elements cover rock architecture, petrophysical property modelling, multi-scale data integration, upscaling and uncertainty analysis. Philip Ringrose and Mark Bentley share their experience, gained from over a hundred reservoir modelling studies in 25 countries covering clastic, carbonate and fractured reservoir types, and for a range of fluid systems - oil, gas and CO₂, production and injection, and effects of different mobility ratios. The intimate relationship between geology and fluid flow is explored throughout, showing how the impact of fluid type, displacement mechanism and the subtleties of single- and multi-phase flow combine to influence reservoir model design. The second edition updates the existing sections and adds sections on the following topics: · A new chapter on modelling for CO₂ storage · A new chapter on modelling workflows · An extended chapter on fractured reservoir modelling · An extended chapter on multi-scale modelling · An extended chapter on the quantification of uncertainty · A revised section on the future of modelling based on recently published papers by the authors The main audience for this book is the community of applied geoscientists and engineers involved in understanding fluid flow in the subsurface: whether for the extraction of oil or gas or the injection of CO₂ or the subsurface storage of energy in general. We will always need to understand how fluids move in the subsurface and we will always require skills to model these quantitatively. The second edition of this reference book therefore aims to highlight the modelling skills developed for the current energy industry which will also be required for the energy transition of the future. The book is aimed at technical-professional practitioners in the energy industry and is also suitable for a range of Master's level courses in reservoir characterisation, modelling and engineering. • Provides practical advice and guidelines for users of 3D reservoir modelling packages • Gives advice on reservoir model design for the growing world-wide activity in subsurface reservoir modelling • Covers rock modelling, property modelling, upscaling, fluid flow and uncertainty handling • Encompasses clastic, carbonate and fractured reservoirs • Applies to multi-fluid cases and applications: hydrocarbons and CO₂, production and storage; rewritten for use in the Energy Transition.

Petroleum Reservoir Rock and Fluid Properties Jun 19 2021 A strong foundation in reservoir rock and fluid properties is the backbone of almost all the activities in the petroleum industry. Petroleum Reservoir Rock and Fluid Properties offers a reliable representation of fundamental concepts and practical aspects that encompass this vast subject area. The book provides up-to-date coverage of vari

Fundamentals of Reservoir Engineering Jun 07 2020 "This book is fast becoming the standard text in its field", wrote a reviewer in the Journal of Canadian Petroleum Technology soon after the first appearance of Dake's book. This prediction quickly came true: it has become the standard text and has been reprinted many times. The author's aim - to provide students and teachers with a coherent account of the basic physics of reservoir engineering - has been most successfully achieved. No prior

knowledge of reservoir engineering is necessary. The material is dealt with in a concise, unified and applied manner, and only the simplest and most straightforward mathematical techniques are used. This low-priced paperback edition will continue to be an invaluable teaching aid for years to come.

Proceedings of the International Field Exploration and Development Conference 2018

May 19 2021 This book gathers selected papers from the 8th International Field Exploration and Development Conference (IFEDC 2018) and addresses a broad range of topics, including: Reservoir Surveillance and Management, Reservoir Evaluation and Dynamic Description, Reservoir Production Stimulation and EOR, Ultra-Tight Reservoirs, Unconventional Oil and Gas Resources Technology, Oil and Gas Well Production Testing, and Geomechanics. In brief, the papers introduce readers to upstream technologies used in oil & gas development, the main principles of the process, and various related design technologies. The conference not only provided a platform to exchange experiences, but also promoted the advancement of scientific research in oil & gas exploration and production. The book is chiefly intended for industry experts, professors, researchers, senior engineers, and enterprise managers.

Polymer-Improved Oil Recovery Mar 29 2022 The importance of oil in the world economy cannot be overstated, and methods for recovering oil will be the subject of much scientific and engineering research for many years to come. Even after the application of primary depletion and secondary recovery processes (usually waterflooding), much oil usually remains in a reservoir, and indeed in some heterogeneous reservoir systems as much as 70% of the original oil may remain. Thus, there is an enormous incentive for the development of improved or enhanced methods of oil recovery, aimed at recovering some portion of this remaining oil. The techniques used range from 'improved' secondary flooding methods (including polymer and certain gas injection processes) through to 'enhanced' or 'tertiary' methods such as chemical (surfactant, caustic, foam), gas miscible (carbon dioxide, gas reinjection) and thermal (steam soak and drive, in-situ combustion). The distinction between the classification of the methods usually refers to the target oil that the process seeks to recover. That is, in 'improved' recovery we are usually aiming to increase the oil sweep efficiency, whereas in 'tertiary' recovery we aim to mobilise and recover residual or capillary trapped oil. There are a few books and collections of articles which give general overviews of improved and enhanced oil recovery methods. However, for each recovery method, there is such a wide range of interconnected issues concerning the chemistry, physics and fluid mechanics of flow in porous media, that rarely are these adequately reviewed.